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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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24283	7590	11/16/2009	EXAMINER	
PATTON BOGGS LLP 1801 CALIFORNIA STREET SUITE 4900 DENVER, CO 80202			FRISTOE JR, JOHN K	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,443	Applicant(s) SNEH, OFER	
	Examiner JOHN K. FRISTOE JR	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 139-144 and 153-167 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 139-144, 153-158 and 163-167 is/are rejected.
- 7) ☒ Claim(s) 159-162 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8/18/2009 have been fully considered but they are not persuasive. Applicant argues that Ralston does not disclose mechanically driving a flexible member, the examiner disagrees. Ralston has the capability of being mechanically driven to the open or closed position by the lever (12) and in turn moves the flexible member. Applicant then argues that Ralston does not disclose mechanically driving the diaphragm resulting in shutting the flow path, the examiner disagrees. When the lever (12) is pushed down the valve is brought to the closed position and the diaphragm or flexible member can be at least partially moved. Applicant then argues that the latch and finger of Ralston are not actuators and therefore an actuator does not hold the valve in the closed position, the examiner disagrees. Ralston's actuator or lever (12) hold the valve in the closed position via the latch and finger. Applicant also argues that the valve of Ralston is not opened and closed pneumatically, the examiner disagrees. The valve assembly of Ralston can be operated pneumatically by adding pressure to one side of the diaphragm or flexible member and then removing the pressure. Finally Applicant argues that the examiner does not address "pneumatically reducing the force of the valve actuator against the valve diaphragm while changing the pressure in the valve chamber to hold the valve diaphragm closed to create an active shut valve state" the examiner disagrees. The examiner does not have to specifically address each limitation in the claim if each structural limitation has been addressed and the functionality of the structure can be easily gleaned from a cursory review of the prior art. The valve of Ralston can be operated by pneumatically adding or removing pressure in the diaphragm chamber which would reduce the force needed on the actuator or lever

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(12). Since the following prior art rejections are being maintained, the instant Office action has been made final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 139, 140, 166, and 167 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 1,528,074 (Ralston). Ralston discloses a method of operating a fluid control valve comprising mechanically holding (via element 17) the valve (E) closed in an inactive state (figure 1) in which it cannot be operated pneumatically (via element 15), changing the valve (E) to an active state (figure 2) in which it can be opened and closed pneumatically (via element 15), opening and closing the valve pneumatically (via element 15), pneumatically (via element 15) actuating a mechanical valve actuator (reciprocating shaft), and wherein the flexible member (15) closes the flow path when the valve (E) is closed and said opening and closing said valve (E) pneumatically is performed by deflecting the flexible member using gas pressure (the examiner does not consider “gas” to be limiting since any gas or fluid would perform the same function within the diaphragm chamber).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 141 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 1,528,074 (Ralston) in view of U.S. Pat. No. 4,103,864 (Hagendra). Ralston discloses a method of operating a fluid control valve comprising mechanically holding (via element 17) the valve (E) closed in an inactive state (figure 1) in which it cannot be operated pneumatically (via element 15), changing the valve (E) to an active state (figure 2) in which it can be opened and closed pneumatically (via element 15), opening and closing the valve pneumatically (via element 15), and pneumatically (via element 15) actuating a mechanical valve actuator (reciprocating shaft) but lacks a spring mechanically holding the valve closed. Hagendra teaches a method of operating a fluid control valve by mechanically holding the valve closed with a spring member (26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of operating a fluid control valve of Ralston by holding the valve closed with a spring member as taught by Hagendra since using a known method of biasing a mechanical member will yield a predictable result.

6. Claims 142-144, 153-158, 163, and 164 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 1,528,074 (Ralston) in view of U.S. Pat. No. 3,957,244 (Chauvigne). Ralston discloses a method of operating a fluid control valve comprising mechanically holding (via element 17) the valve (E) closed in an inactive state (figure 1) in which it cannot be operated pneumatically (via element 15), changing the valve (E) to an active state (figure 2) in which it can be opened and closed pneumatically (via element 15), opening and closing the valve pneumatically (via element 15), and pneumatically (via element 15) actuating a mechanical valve actuator (reciprocating shaft) but lacks the valve being a diaphragm. Chauvigne teaches a method of operating a fluid control valve comprising holding a

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valve diaphragm (4) closed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of operating a fluid control valve of Ralston by making the valve a diaphragm as taught by Chauvigne since using a known valve type would yield a predictable result.

7. Claim 165 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 1,528,074 (Ralston) in view of U.S. Pat. No. 6,042,652 (Hyun et al.). Ralston discloses a method of operating a fluid control valve comprising mechanically holding (via element 17) the valve (E) closed in an inactive state (figure 1) in which it cannot be operated pneumatically (via element 15), changing the valve (E) to an active state (figure 2) in which it can be opened and closed pneumatically (via element 15), opening and closing the valve pneumatically (via element 15), and pneumatically (via element 15) actuating a mechanical valve actuator (reciprocating shaft) but lacks the method comprising the pulsed delivery of gas into an atomic layer deposition apparatus. Hyun et al. teach an ALD apparatus (Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of operating a fluid control valve of Ralston by controlling the flow of fluid into a ALD apparatus with a valve as taught by Hyun et al. since the valve can control the flow of fluid into any apparatus including an ALD apparatus.

Allowable Subject Matter

8. Claims 159-162 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Fristoe Jr. whose telephone number is (571) 272-4926. The examiner can normally be reached on Monday-Friday, 7: 00 a.m-4: 30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin O. Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John K. Fristoe Jr./
John K. Fristoe Jr.
Primary Examiner
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JKF